AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended): A compensating element comprising a closed loop of conductive material having a size and proximity to an inductive loop antenna of an RFID tag for electromagnetic coupling to the ~~an~~ inductive loop antenna to substantially maintain an operating frequency of the inductive loop antenna at or near an operating frequency of an RFID system in the presence of other RFID tags.

Claim 2 (Original): The compensating element of claim 1, wherein a parasitic current is induced in the compensating element in response to the electromagnetic coupling to the inductive loop antenna.

Claim 3 (Original): The compensating element of claim 1 wherein the conductive material comprises one of a die cut metal foil, a patterned metal foil, an electroplated conductive metal, a printed conductive ink, and a printed precursor material reduced to a conductive state.

Claim 4 (Original): The compensating element of claim 1 having a substantially rectilinear shape.

Claim 5 (Original): The compensating element of claim 1 having a substantially circular shape.

Claim 6 (Original): The compensating element of claim 1 further comprising a substrate upon which the closed loop is disposed.

Claim 7 (Original): The compensating element of claim 6 further comprising an adhesive layer disposed on one side of the substrate.

Claim 8 (Original): The compensating element of claim 7 wherein the compensating element and the adhesive layer are disposed on the same side of the substrate.

Claim 9 (Original): The compensating element of claim 7 wherein the compensating element and the adhesive layer are disposed on opposite sides of the substrate.

Claim 10 (Currently Amended): A radio frequency identification (RFID) tag, comprising:

an inductive loop antenna; and

a compensating element sized and positioned on the RFID tag proximate the inductive loop antenna for electromagnetic coupling to the inductive loop antenna to substantially maintain an operating frequency of the inductive loop antenna at or near an operating frequency of an RFID system in the presence of other RFID tags.

Claim 11 (Original): The RFID tag of claim 10, wherein a parasitic current is induced in the compensating element by a primary current in the inductive loop antenna.

Claim 12 (Original): The RFID tag of claim 10 wherein the compensating element is positioned for electromagnetic coupling to the inductive loop antenna such that an RFID system interrogating antenna is able to detect the compensated RFID tag when in close proximity to other RFID tags.

Claim 13 (Original): The RFID tag of claim 10, further including a RFID die having identification information stored therein.

Claim 14 (Original): The RFID tag of claim 10 wherein the compensating element comprises a closed loop of conductive material.

Claim 15 (Original): The RFID tag of claim 14 wherein the closed loop has a substantially rectilinear shape.

Claim 16 (Original): The RFID tag of claim 14 wherein the closed loop has a substantially circular shape.

Claim 17 (Original): The RFID tag of claim 14 wherein the closed loop is electrically isolated from the inductive loop antenna.

Claim 18 (Original): The RFID tag of claim 14 wherein the closed loop is electrically connected to the inductive loop antenna.

Claim 19 (Original): The RFID tag of claim 14 wherein the closed loop is disposed within an innermost loop of the inductive loop antenna.

Claim 20 (Original): The RFID tag of claim 14 wherein the closed loop is disposed between loops of the inductive loop antenna.

Claim 21 (Original): The RFID tag of claim 14 wherein the closed loop is disposed outside an outermost loop of the inductive loop antenna.

Claim 22 (Original): The RFID tag of claim 14 wherein the compensating element has an angular displacement of between 0 and 45 degrees with respect to an axis of the inductive loop antenna.

Claim 23 (Original): The RFID tag of claim 14 wherein the conductive material comprises one of a die cut metal foil, a patterned metal foil, an electroplated conductive metal, a printed conductive ink, and a printed precursor material reduced to a conductive state.

Claim 24 (Original): The RFID tag of claim 14 wherein the closed loop is disposed within 10 line widths of at least one loop of the inductive loop antenna.

Claim 25 (Original): The RFID tag of claim 14 wherein the closed loop is disposed within 2 line widths of at least one loop of the inductive loop antenna.

Claim 26 (Original): The RFID tag of claim 10 wherein the compensating element has an axis that is substantially aligned with an axis of the inductive loop antenna.

Claim 27 (Original): The RFID tag of claim 10 wherein the compensating element lies substantially in a plane parallel and proximate to a plane of the inductive loop antenna.

Claim 28 (Original): The RFID tag of claim 10 wherein the compensating element is substantially coplanar with the inductive loop antenna.

Claim 29 (Original): The RFID tag of claim 10 wherein the RFID tag resonates at a frequency of approximately 13.56 ± 1.0 MHz.

Claim 30 (Original): The RFID tag of claim 10 wherein the compensating element is physically separate from the inductive loop antenna.

Claim 31 (Original): The RFID tag of claim 10 wherein the compensating element comprises at least one loop of the inductive loop antenna electrically connected to at least one other loop of the inductive loop antenna.

Claim 32 (Currently Amended): ~~The RFID tag of claim 31~~ A radio frequency identification (RFID) tag, comprising:

an inductive loop antenna; and

a compensating element positioned for electromagnetic coupling to the inductive loop antenna,

wherein the compensating element comprises at least one loop of the inductive loop antenna electrically connected to at least one other loop of the inductive loop antenna,

wherein the compensating element ~~closed loop~~ comprises at least two loops of the inductive loop antenna, and wherein each of the two loops of the inductive loop antenna is electrically connected to a different one other loop of the inductive loop antenna.

Claim 33 (Original): The RFID tag of claim 32 wherein the at least two loops of the inductive loop antenna electrically connected to at least one other loop of the inductive loop antenna are adjacent loops.

Claim 34 (Original): The RFID tag of claim 32 wherein the at least two loops of the inductive loop antenna electrically connected to at least one other loop of the inductive loop antenna are non-adjacent loops.

Claim 35 (Currently Amended): ~~The RFID tag of claim 31~~ A radio frequency identification (RFID) tag, comprising:

an inductive loop antenna; and

a compensating element positioned for electromagnetic coupling to the inductive loop antenna,

wherein the compensating element comprises at least one loop of the inductive loop antenna electrically connected to at least one other loop of the inductive loop antenna, and

wherein the at least one loop of the inductive loop antenna is electrically shorted to the at least one other loop of the inductive loop antenna.

Claim 36 (Withdrawn): A radio frequency identification (RFID) system, comprising:

a storage area to store a plurality of articles each having an associated one of a plurality of RFID tags, and wherein at least one of the RFID tags is a compensated RFID tag;

an interrogating antenna proximate the storage area to produce an interrogating electromagnetic field sufficient to induce a response from the plurality of RFID tags; and

an RFID reader coupled to the interrogating antenna for controlling power to the antenna and to receive information from the RFID tags communicated by the interrogating antenna,

wherein the compensated RFID tag comprises an inductive loop antenna and a compensating element positioned for electromagnetic coupling to the inductive loop antenna such that the interrogating antenna is able to communicate with the compensated RFID tag even when in the compensated RFID tag is in the presence of the other RFID tags.

Claim 37 (Withdrawn): The system of claim 36 wherein a parasitic current is induced in the compensating element by a primary current in the inductive loop antenna.

Claim 38 (Withdrawn): The system of claim 36 further comprising an article management system to receive the information from the RFID reader and store the information in a database.

Claim 39 (Withdrawn): The system of claim 36 further comprising a remote computer coupled to the article management system to present the information to a remote user.

Claim 40 (Withdrawn): The system of claim 36 wherein the storage area includes at least one of a shelving unit, a cabinet, a vertical file separator, a smart cart, and a desktop reader.

Claim 41 (Withdrawn): The system of claim 36 wherein the information includes location information for the article within the storage area.

Claim 42 (Withdrawn): The system of claim 36 where the articles having associated RFID tags include at least one of files and documents.

Claim 43 (Withdrawn): The compensated RFID tag of claim 36 wherein the compensating element is disposed within 10 line widths of at least one loop of the inductive loop antenna.

Claim 44 (Withdrawn): The compensated RFID tag of claim 36 wherein at least some of the other RFID tags are uncompensated RFID tags.

Claim 45 (Withdrawn): The compensated RFID tag of claim 36 wherein at least some of the other RFID tags are compensated RFID tags.

Claim 46 (Currently Amended): A Radio Frequency Identification (RFID) tag for placement on a conductive surface, comprising:

a substrate;

an inductive loop antenna positioned on the substrate;

a compensating element sized and positioned on the RFID tag proximate the inductive loop antenna for electromagnetic coupling to the inductive loop antenna to substantially maintain an operating frequency of the inductive loop antenna at or near an operating frequency of an RFID system in the presence of other RFID tags; and

a dielectric spacer positioned between the substrate and the conductive surface.

Claim 47 (Original): The RFID tag of claim 46 wherein the dielectric spacer has a dielectric constant less than 10.

Claim 48 (Original): The RFID tag of claim 47 wherein the dielectric spacer has a dielectric constant less than 3.

Claim 49 (Original): The RFID tag of claim 46 wherein the dielectric spacer has a thickness of less than 10mm.

Claim 50 (Original): The RFID tag of claim 49 wherein the dielectric spacer has a thickness of less than 5mm.

Claim 51 (New): The RFID tag of claim 10, wherein the inductive loop antenna is a multi-turn inductive loop antenna.

Claim 52 (New): The RFID tag of claim 10, wherein the operating frequency of the inductive loop antenna is inversely proportional to a distance between the compensating element and the inductive loop antenna.

Claim 53 (New): The RFID tag of claim 10, wherein the inductive loop antenna is electromagnetically coupled to an interrogating magnetic field generated by an RFID reader, and wherein the compensating element is not electromagnetically coupled to the interrogating magnetic field generated by the RFID reader.

Claim 54 (New): The RFID tag of claim 24, wherein the RFID tag resonates at a frequency of approximately 13.56 ± 1.0 MHz.

Claim 55 (New): A method comprising:

selecting a size for a compensating element;

forming the compensating element according to the selected size; and

positioning the compensating element on an RFID tag proximate an inductive loop antenna so as to provide electromagnetic coupling by the compensating element to the inductive loop antenna to substantially maintain an operating frequency of the inductive loop antenna at or near an operating frequency of an RFID system in the presence of other RFID tags.

Claim 56 (New): The method of claim 55, wherein the conductive loop antenna is a multi-turn antenna, and wherein positioning the compensating element comprises positioning the compensating element interspersed with loops of the inductive loop antenna.

Claim 57 (New): The method of claim 55, further comprising electrically connecting the compensating element to antenna via a conductive jumper connecting an innermost loop of the inductive loop antenna to a point on a perimeter of the compensating element.

Claim 58 (New): The method of claim 55,

wherein selecting the size of the compensating element comprises selecting a diameter of the compensating element based on a diameter of the inductive loop antenna, and

wherein a frequency response of the inductive loop antenna is greater when the diameter of the compensating element is sized within a range bounded by a diameter of an innermost loop of the inductive loop antenna and a diameter of an outermost loop of the inductive loop antenna than when the diameter of the compensating element is not sized within the range.